THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YOZO SUGA, HOTAKA HONMA,
YOSHIYUKI USHIGAMI and SYUJI KITAHARA

Appeal No. 94-2693
Application 07/731,111[1]

HEARD: June 4, 1996

Before TURNER, WEIFFENBACH and OWENS, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the Examiner's decision rejecting claims 1, 2 and 5-10 which are all of the claims remaining in the application.

Illustrative claim 1 is reproduced below:

1. A process for producing an ultra high silicon electrical thin steel sheet by cold rolling, which comprises cold-rolling a steel consisting essentially of by weight not more than 0.006% of carbon, 5.0 to 7.1% of silicon, 0.07 to 0.30% of

[1] Application for patent filed July 15, 1991.

manganese, not more than 0.007% of sulfur, 0.006 to 0.038% of acid soluble aluminium and 8 to 30 ppm of total nitrogen with the balance consisting of iron and unavoidable impurities at a sheet temperature in the range of from 120 to 350°C, said steel sheet being cold rolled to a thickness of 0.23 mm or less, and annealing the cold-rolled sheet for recrystallization and grain growth.

The references of record relied upon by the Examiner are:

Nakaoka et al. (Nakaoka)	4,773,948	Sep. 27, 1988
Nakaoka et al. (JP '923) (Japan)	61-166923	Jul. 28, 1986

The appealed claims stand rejected under 35 U.S.C. § 103 as unpatentable over Nakaoka in view of JP '923.

The subject matter on appeal is directed to a process for producing a silicon electrical thin steel sheet comprising cold rolling a steel sheet containing specified amounts of carbon, silicon, manganese, sulfur, acid soluble aluminum, nitrogen, iron and unavoidable impurities at a specified temperature and wherein the sheet is cold rolled to a certain thickness, and annealing the sheet. A more detailed description can be gleaned from a reading of claim 1.

According to Appellants, the claims are to be grouped as follows:

1) claims 1 and 5-9; and

2) claims 2 and 10.

OPINION

We have carefully reviewed the record before us, including each of the arguments and comments advanced by Appellants and the Examiner in support of their respective positions. This review leads us to conclude that the Examiner's position is not well founded. Accordingly, we will not sustain the rejection. Our reasons follow.

We find ourselves in agreement with the position set forth by Appellants at pages 6-12 of the Brief. In sum, we find no suggestion in the Nakaoka reference or Nakaoka in combination with JP '923 to provide aluminum and nitrogen in the steel sheet process in the ranges provided for in the claims which would permit cold rolling of the steel sheet to the claimed thickness of 0.23 mm or less. Since the references provide no suggestion of the amount of nitrogen in the sheet nor any suggestion that thicknesses of 0.23 mm or less are possible, it is our view that the Examiner has not established a prima facie case of obviousness. Thus, the rejection fails for lack of a sufficient factual basis upon which to reach a conclusion of obviousness. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). We would point out that Appellants refer to data plotted in figure 1 which is said to establish criticality as to the ranges of aluminum and nitrogen for purposes of avoiding breakage problems

during cold rolling. The data reflects that the amounts of nitrogen and aluminum within the claimed range produce results which one of ordinary skill in the art would not have expected and the Examiner has not commented positively or negatively upon the data.

For the reasons set forth by Appellants and the comments above, we reverse.

REVERSED

VINCENT D. TURNER)
Administrative Patent Judge)
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)
CAMERON WEIFFENBACH) BOARD OF
Administrative Patent Judge) PATENT APPEALS
) AND
) INTERFERENCES
)
)
TERRY J. OWENS)
Administrative Patent Judge)

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